



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/551.332	04/18/00	BAUN	K 12187-19

MMC1/1108
STRADLING YOCCA CARLSON & RAUTH
IP DEPARTMENT
660 NEWPORT CENTER DRIVE. SUITE 1600
P.O. BOX 7680
NEWPORT BEACH CA 92660-6441


EXAMINER	
WINSTEDT, J	
ART UNIT	PAPER NUMBER
2872	
DATE MAILED: 11/08/00	

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No. 09/551,332	Applicant(s) aun, Smith, Hoot, Wachala, Tingey, Duchon, Dew
Examiner Jennifer Winstedt	Group Art Unit 2872



☒ Responsive to communication(s) filed on 8/11/00

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) 6-14 and 20-24 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 6-14 and 20-24 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☒ The drawing(s) filed on 4/18/00 is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☒ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 2

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

Art Unit: 2872

DETAILED ACTION

Drawings

- ✓. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "48" has been used to designate a LED, an external power source, and a recessed opening. Correction is required.
- ✓. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: ✓71, ✓89, and ✓95. Correction is required.

Specification

- ✓. The abstract of the disclosure does not commence on a separate sheet in accordance with 37 CFR 1.52(b)(1). A new abstract of the disclosure is required and must be presented on a separate sheet, apart from any other text.
4. The disclosure is objected to because of the following informalities:
- ✓ page 3, line 35, "measurements of obtained" should be "measurements obtained";
 - / page 11, line 8, "moving telescope" should be "moving the telescope";
 - / page 12, line 31, "FIG. 3a" should be "FIG. 3b";
 - ✓ page 13, line 8, "FIG. 3b" should be "FIG. 3a";

Art Unit: 2872

pages 14-16, in the Figures (3a, 3b, etc.) pin connector 40 is connected to motor assembly 32 (the AZ motor) and connector 42 is connected to motor assembly 34 (the Alt motor) while the disclosure has 40 being connected to 34 and 42 being connected to 32;

✓ page 21, line 9, "extend of a subsequent" should be "extend a subsequent";

✓ page 21, line 31, "combinations values" should be "combinations of values";

✓ page 26, line 8, "condition obtain" should be "condition is obtained";

✓ page 37, line 21, "general purpose microprocessor 120" should be "general microprocessor 121";

✓ page 37, line 24, "microcontroller 121" should be "microcontroller 122";

✓ page 54, line 32, "initialization prior to" should be "initialization and prior to";

✓ page 66, line 27, "microprocessor 122" should be "microprocessor 121";

✓ page 66, line 34, "clock and data bus 132" should be "clock and data bus 123";

✓ page 74, line 11, "proved" should be "provided";

✓ page 74, line 26, "with both horizon and with north" should be "with both horizon and north".

Appropriate correction is required.

Art Unit: 2872

Claim Rejections - 35 U.S.C. § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 14 recites that the telescope is provided in a polar configuration. However, claim 13, from which claim 14 depends, recites that the telescope is provided in an alt-azimuth configuration, which is a Cartesian configuration. How can the telescope be provided in a polar and a Cartesian configuration at the same time?

Claim Rejections - 35 U.S.C. § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 20, 21, 22, 23, and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Krewalk et al.

Art Unit: 2872

Regarding claim 20, Krewalk et al. discloses a fully automated telescope system with functional intelligence distributed between independent components, the telescope system of the type including a telescope mounted for rotation about two substantially orthogonal axes (see Figure 8), the automated telescope system comprising an intelligent motor module, the motor module including means for commanding a motor to rotate the telescope a desired arcuate amount about a respective axis (180, Figure 8), and further including means for determining the actual arcuate amount of rotation (134, 208, Figure 8); a command module, including means for translating a user input into signals suitable for transmission to the motor module (196, Figure 8), the motor module processing the signals into motor motion commands (column 11, lines 32-34); and a communication bus coupled between the command module and the motor module (200, Figure 8).

Regarding claim 21, Krewalk et al. discloses first means for determining a horizontal aspect of the telescope (208, Figure 8); second means for determining a vertical aspect of the telescope (206, Figure 8); and wherein the first and second means provide signals corresponding to each determined aspect to the command module (column 13, line 46 - column 20, line 49 and column 21, lines 12-15).

Regarding claim 22, Krewalk et al. discloses means for defining a geographical position of the telescope (column 20, lines 52-53); and means for processing the geographical position, the horizontal aspect and the vertical aspect of the telescope in order to orient the telescope with

Art Unit: 2872

respect to a celestial coordinate system (column 13, line 46 - column 20, line 49 and column 21, lines 12-15).

Regarding claim 23, Krewalk et al. discloses means for selecting a desired celestial object, wherein the telescope system automatically traverses to that object without further intervention by a user (column 14, line 16 - column 20, line 49).

Regarding claim 24, Krewalk et al. discloses means for automatically inputting a time parameter (column 20, lines 57-63).

Claim Rejections - 35 U.S.C. § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 6, 7, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krewalk et al. in view of Leblanc.

Regarding claim 6, Krewalk et al. discloses an automated telescope system of the type including a telescope mounted for rotation about two substantially orthogonal axes (see Figure 8), the automated telescope system comprising first and second motor assemblies, each coupled to rotate the telescope about a respective one of the axes (see Figure 8), each motor assembly including a motor having a rotatable shaft (92, Figure 8) and an optical encoder

Art Unit: 2872

coupled to the motor shaft for providing motor movement feedback information (134, 208, Figure 8 and column 21, line 68 - column 9, line 4); and a command unit connected to each motor assembly over a respective serial communication bus, the command unit receiving telescope movement commands from a user and developing appropriate control signals for communication to the motor control assembly (196, Figure 1). Krewalk et al. also discloses a motor control processor for commanding motor movement and evaluating optical encoder feedback information (180, Figure 8). Krewalk et al. does not disclose each motor assembly including a motor control processor. Leblanc discloses first and second motor assemblies each including a motor control for commanding motor movement and evaluating optical encoder feedback information (101, 102, Figure 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have each of the first and second motor assemblies of Krewalk et al. include a motor control processor as Leblanc suggests in order to be able to move the telescope with great accuracy (column 2, lines 16-17; Leblanc).

Regarding claims 7 and 8, the combination discloses that the command unit further comprises a housing (see Figure 1; Krewalk et al.); a keypad, disposed on the housing for manipulation by a user to define telescope movement commands (196, Figure 1; Krewalk et al.); a microcontroller, disposed within the housing, the microcontroller translating user manipulation of the keypad into control signals, the control signals directed to each motor assembly over the serial communication bus (column 14, lines 33-35 and column 19, lines 50-53; Krewalk et al.); a memory (column 14, lines 43-44; Krewalk et al.); and a microprocessor, wherein the memory is

Art Unit: 2872

adapted to host application software program code, executable by the microprocessor, the microprocessor performing high level application software execution tasks and numerical processing in order to define commands to the microcontroller, the microcontroller translating the commands into control signals for each motor assembly (column 14, line 33 - column 20, line 49; Krewalk et al.). The combination does not disclose the housing being configured to be comfortably hand held. Krewalk et al. discloses that housings that are configured to be comfortably hand held are well known (184, Figure 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the housing of the combination be configured to be comfortably hand held as Krewalk et al. suggests in order to make the command unit easier to handle.

11. Claims 9, 10, 11, 12, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krewalk et al. in view of Leblanc as applied to claims 6, 7, and 8 above, and further in view of Whitmore.

Regarding claim 9, Krewalk et al. in view of Leblanc discloses a first database, contained in memory, the first database including a catalog of celestial objects, each identified by a set of celestial coordinates (226, Figure 9). Krewalk et al. in view of Leblanc does not disclose a second database, contained in memory, the second database including a catalog of geographical locations, each identified by a set of earth-based coordinates. Whitmore discloses a second database, contained in memory, including a catalog of geographical locations, each identified by a set of earth-based coordinates (lines 16-19, Abstract). It would have been obvious to one of

Art Unit: 2872

ordinary skill in the art at the time the invention was made to have in the automated telescope system of Krewalk et al. in view of Leblanc a second database, contained in memory, including a catalog of geographical locations, each identified by a set of earth-base coordinates as Whitmore suggests in order to allow a user to input the geographic location of the telescope without having to look at a map (column 20, lines 50-56; Krewalk et al.).

Regarding claim 10, Krewalk et al. in view of Leblanc further in view of Whitmore discloses that a user identifying a geographical location from the second database, proximate the user's actual location, wherein the command unit includes program means for translating earth-based coordinates into celestial coordinates (column 13, line 46 - column 20, line 49; Krewalk et al.).

Regarding claims 11 and 12, Krewalk et al. in view of Leblanc further in view of Whitmore discloses that the command unit includes means for receiving telescope position indications from each motor assembly, the command unit processing the position indications in combination with the geographical location in order to define the telescope's orientation with respect to the celestial coordinate system (column 13, line 46 - column 20, line 49 and column 21, lines 12-15; Krewalk et al.), and wherein the command unit includes means for automatically traversing the telescope to a desired celestial object and for tracking the celestial path of the celestial object without further intervention by a user (column 14, line 16 - column 20, line 49; Krewalk et al.).

Art Unit: 2872

Regarding claims 13 and 14, Krewalk et al. in view Leblanc further in view of Whitmore discloses that the telescope can be provided in an alt-azimuth configuration or a polar configuration (lines 4-5, Abstract; Krewalk et al.).

Conclusion

12. Any inquiry concerning the merits of this communication or earlier communications from the examiner should be directed to Jennifer Winstedt whose telephone number is (703) 305-0577. The fax number for the Group is (703) 308-7722 or 7724.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

JW

October 31, 2000



Grey Chang
Primary Examiner
Technology Center 2800
Technology Center 2800